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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,133	10/26/2005	Gerrit H. Verwoerd	VERWOERD 1 PCT	1283
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COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576				
EXAMINER				
LEE, GILBERT Y				
ART UNIT		PAPER NUMBER		
3676				
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05/12/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/550,133

Applicant(s)

VERWOERD, GERRIT H.

Examiner

GILBERT Y. LEE

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 8-13 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed 2/17/09 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 8-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amendment to claim 8 recites "an interior surface facing the groove that is upwardly inclined from a wall of the groove" and "said sealing rings having a shoulder corresponding to a shape of the inclined surface of the lug". The orientation of the combination has not previously been disclosed in the current application. It seems that the applicant has taken the structure shown in Figs. 1c and 4a-4c to amend claim 8; however, Fig. 1a clearly shows the combination being annular. The shape of the shoulder and lug has not previously been mentioned. Although Figures 4a-4c might show the four elements having corresponding shaped, it is unclear whether the shape is due to installation/stress or if the shapes are actually preformed.

Claims 9-13 are rejected for depending on a rejected claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8-13, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosch (FR Patent No. 1,391,410) in view of Reid (US Patent No. 2,859,061) and Benware (US Patent No. 3,642,248).

Regarding claim 8, the Bosch reference, as best understood discloses a combination valve (Page 2, Lines 70-83), piston (2), cylinder (1) and annular gap seal (Fig. 4), said annular gap seal blocking a flow of fluid from a high-pressure side to a low-pressure side of the valve in a blocked position (Page 2, Lines 70-83), the valve having the cylinder which the fluid may flow through and in which the piston is axially displaceable (Fig. 4), and an annular gap (e.g. gap between 1 and 2) between the piston and the cylinder (Fig. 4) being sealable in the blocked position using the annular gap seal (Fig. 4), which lies in a peripheral groove (Fig. 4), two sealing rings (23 and 24) positioned mirror-symmetrically (Fig. 4) and a sealing surface (A) of a first sealing ring (Fig. 4),

a sealing shoulder (B) of the first sealing ring (Fig. 4), and a sealing lip (C). Note that the seal of the Bosch reference is capable of blocking flow of a fluid (Page 2, Lines 70-83).

However, the Bosch reference fails to explicitly disclose the groove being in the cylinder; a peripheral lug on both sides, projecting into the groove; the lug having an underside that is upwardly inclined from a wall of the groove toward the middle plane of the groove; and the sealing rings having a shoulder corresponding to a shape of the inclined surface of the lug and contacting the lug in an area where the lug is inclined.

The Reid reference, a seal used with a piston, discloses making the groove in the piston or the cylinder (Figs. 17 and 22).

It would have been obvious to one of ordinary skill in the art at the time of the invention to place the groove in the cylinder instead of the piston in the Bosch reference in view of the teachings of the Reid reference as a matter of mechanical expedience and to reduce manufacturing costs.

The Benware reference, a sealing mechanism, discloses providing peripheral lugs (e.g. including 145, 147, 149 and 146, 148, 150) that project toward a middle plane of the groove (Fig. 6) to the groove, the lug having an underside that is upwardly inclined from a wall of the groove toward the middle plane of the groove (Fig. 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide peripheral lugs to the Bosch reference in view of the teachings of the Benware reference in order to lock the seal in the groove (Abstract).

It would have been an obvious matter of mechanical expedience to make the lugs and shoulders of corresponding shapes and make the lug with inclined surfaces. A change in form or shape is generally recognized as being within the level of ordinary skill in the art, absent any showing of unexpected results. It would have been obvious to one of ordinary skill in the art to make the lugs and shoulders of the Bosch reference of corresponding shapes and to provide the lugs with inclined surfaces in order to limit movement of the seal.

Regarding claim 9, the Bosch reference, as modified in claim 8, discloses the sealing rings having a C-profile (Fig. 4).

Regarding claim 10, the Bosch reference, as modified in claim 8, discloses the annular gap seal (Fig. 4). Note that the annular seal of the Bosch reference is **capable of** being pretensioned.

Regarding claim 11, the Bosch reference, as modified in claim 8, discloses a stabilizing element (17) which may be laid in the direction of the groove with the sealing rings (Fig. 4).

Regarding claim 12, the Bosch reference, as modified in claim 8, discloses the stabilizing element being a coiled spring (Fig. 4). Note that the spring of the Bosch reference is **capable of** being inserted in a torus shape.

Regarding claim 13, the Bosch reference, as modified in claim 11, discloses the annular gap seal (Fig. 4). Note that the annular seal of the Bosch reference is **capable of** being pre-tensioned using the stabilizing element.

Response to Arguments

4. Applicant's arguments with respect to claim 8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GILBERT Y. LEE whose telephone number is (571)272-5894. The examiner can normally be reached on 8:00 - 4:30, M-F.

Art Unit: 3676

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer H. Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer H Gay/
Supervisory Patent Examiner, Art
Unit 3676

/G. Y. L./
Examiner, Art Unit 3676